

**Abstract****FAN-OUT SEMICONDUCTOR CHIP ASSEMBLY**

A packaged semiconductor chip including the chip, and a package element such as a heat sink is made by connecting flexible leads between contacts on the chip and terminals on a dielectric element such as a sheet or plate and moving the sheet or plate away from the chip, and injecting a liquid material to form a compliant layer filling the space between the package element and the dielectric element, and surrounding the leads. The dielectric element and package element extend outwardly beyond the edges of the chip, and physically protect the chip. The assembly may be handled and mounted by conventional surface mounting techniques. The assembly may include additional circuit elements such as capacitors used in conjunction with the chip.

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